Nick Land

Scott Bukatman, *Terminal Identity: the Virtual Subject in Postmodern Science Fiction* (Durham, NC, and London: Duke University Press, 1993), 404 pp., £15.99 (paperback)

Kevin Kelly, *Out of Control: the New Biology of Machines* (London: Fourth Estate, 1994), 472 pp., £16.99 (hardback)

Carol A. Stabile, *Feminism and the Technological Fix* (Manchester: Manchester University Press, 1994), 184 pp., £35.00 (hardback), £12.99 (paperback)

Gregory L. Ulmer, *Heuretics: the Logic of Invention* (Baltimore and London, Johns Hopkins University Press, 1994), 267 pp., £33.00 (hardback), £11.50 (paperback)

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The observation that postmodernity has arrived – if only as autonomized hype – is no longer controversial. The crisis of modernist institutions is both evident and general, and the source of this disorder is widely traced to the new planetary techno-commercial system based upon deregulated markets and computer communications (now beginning a Kondratieff-wave upswing).

The convergence of markets with computer systems telecommercializes culture, converting all communicable information into trade-format drifts of 1s and Os. Considering that the academy is a modernist media apparatus about to be crashed by this process, the tone of its analyses is strangely complacent.

Feminism and the Technological Fix is a fairly standard product of the US cultural studies industry, and will seem very dated very soon. Its purported project is to lever feminism away from both ecomystic nostalgia and cyborgian ecstasy in order to anchor it in the impending multi-cultural proletarian insurrection against capitalism. The underlying response to the postmodern syndrome is based entirely on denial. Despite repeated classification of intellectual postures into 'technophobic' and 'technomanic' species, technics itself is entirely ignored. There is no mention at all of computers, information, communication systems, automatic control, etc., cybernetics is treated entirely as an ideological token for imagined seamless totalities, and 'technology' in general – it is bizarrely suggested – is reducible to 'intentions and effects of a particular social order', that is to say, pure expression, zero feedback (p. 71). The inevitable cor-

ollary is an 'analysis of capitalism' that seems to consist entirely of people being unnecessarily nasty to each other, anecdotally supported by accounts of waste dumps on Native American reservations. A promised discussion of the techno-commercial investments of the female body in the area of foetal imaging subsides into an inane rehearsal of the abortion debate, entirely lamed by the combined effects of a reduction to ideology and a residual authoritarian acceptance – shared with the theocrat 'pro-lifers' – of government interference in reproductive issues.

The weaknesses of the book find their most interesting crystallization in a challenge posed to Donna Haraway's engagement with Octavia Butler, where both writers are attacked for their refusal to endorse the modernist nature/culture dichotomy in its crudest possible form. Butler's exquisitely intelligent investigations into biocultural fusions, synergisms and horizontal interactions, which Haraway embraces as an innovative cyborgian dissolution of 'the natural order', are denounced by Stabile for exactly the same reason.

Where Stabile deliberately voids her discourse of cognitive sophistication, Ulmer heads in the opposite direction, and goes into orbit. *Heuretics* is a playful and inventive Derridean (or made 'out of Derrida' (p. 211)) prolegomenon to the uploading of text into hypermedia, involving a diverse range of (avowedly 'francophiliac' = high or unpopular) cultural references. It floats heuretics as a deconstructive-deconstructed research method, employing strategies of inversion and displacement, punning and 'dream reasoning' (p. 123) to link the nodes of a virtual hyper-culture system into an associative network.

Ulmer associates deconstruction with parallel processing, suggesting that:

> Conductive (electronic) logic . . . supplements the established movements of inference between things and ideas (abduction, deduction, induction) with a movement directly between things (unconscious thought).
>
> (p. 127)

This understanding of the simultaneously political and scientific impact of parallelism – or more exactly its force of antipolitical-antiscientific subversion – frees Ulmer from Stabile's rigid neokantian distinction between 'technology' and its social reception. Ulmer merely dissipates this advance, however, departing on a surrealist whirl through the glitzy heights of the mediascape that leads nowhere discernibly consequential. Obsolescent signification models of

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net-dynamics remain broadly in place. The book ends with a joke about custard.

Despite their very different tones and preoccupations, neither Stabile nor Ulmer address the telecommercial dynamics of postmodernity in terms other than those derived from their particular specialist locales, so that both ultimately share an implicit academic addressee, and an endorsement of the university as a monopolistically privileged site for social reflexion. Bukatman and Kelly are far more successful at escaping this ghetto, and participating in spontaneous – rather than institutionally contrived – cultural self-simulations. Both *Terminal Identity* and *Out of Control* are likely to find large and heterogeneous audiences. In different ways both writers explore the contours of materialistic postmodernism, and both come with Bruce Sterling pump-ups on the cover.

Materialist definitions of postmodernity periodize in terms of the approximately 50-year Kondratieff cycles ('long-waves') that correspond to basic retooling pulses in the global economy. The crisis of modernity is traced to the early 1970s, when the last K-wave entered its depressive phase. With a new roller-coaster take-off just beginning, manic postmodernism is arriving for the first time.

The warp-speed acceleration of capital beyond historicity into a virtual mode installs SF as the key to social understanding. The residual past is swamped by an impending future, and the present reformatted as 'the determinate past of something yet to come' (to cite Jameson's crucial formulation, as Bukatman does (p. 111). This event tightly corresponds to the long anticipated 'real subsumption' of the economy into the media, and its arrival consumes the projection of history, which ceases to await an unfolding in time, and occurs precociously in a parallel spatiality. Progress is cancelled by virtual data-matrix, fusionally dissolving modernist culture into computer-based hyperprocesses.

Bukatman's take on postmodernity articulates itself in relation to situationism (mediated by Greil Marcus). It describes the spectacle as 'the centralized manipulation that constructs the citizen's social definition and very existence' (p. 49), affirming Debord's proposition that capital becomes spectacular at the threshold of alienation-density where ideology and fetishism become concrete concensual hallucination. Social untruth autonomizes itself as a media mega-object. Virtual reality takes over.

> It is increasingly evident that society, ever more defined by a set of electronic representations, is based on an accepted fiction, or a

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> 'concensual hallucination', to use William Gibson's definition of cyberspace.
>
> (p. 20)

Postmodernity recycles situationism as contemplative sociology, cinema, and dystopian-masochistic cultural programming: the most nightmarish movie you ever saw. Watch things speed into mayhem on every channel. The final content of the spectacle is its own lucid denunciation. *Terminal Identity* notes most of this, and is intelligent enough to be embarrassed by the evident obsolescence of its rhetoric, but not adventurous enough to begin sorting it out. Instead it provides a catalogue of 'relevant' (p. 55) cultural materials (including fiction, film, comics, and CD-ROM software), accompanied by synopses of social philosophies (treated as SF descriptions), and a vigorous multidimensional defence of SF (which at times threatens to become a plea for its respectability).

The resultant complex symptom is intriguing. Professionalized criticism and other types of 'plex programming' (p. 55) intercut a vastly redundant accumulation of 'terminal identity fictions' (p. 91), tweaked into resonance with a thematic of viral media takeover, presented as a news bombardment or 'cyberblitz' (p. 15) with minimal and incoherent analysis. Bukatman opens the taps to a torrent of telecommercial schizophrenia fiction (Burroughs, Dick, Delany, Ballard, Gibson, Cadigan), films, and other media products which very clearly make the point: everything is going to hell, and it has a lot to do with computers. 'It is the purpose of much recent science fiction to construct a new subject-position to interface with the global realms of data circulation' (pp. 8–9), in Burroughs' words: a terminal identity. You are then jacked into a paranoid delirium, with unrepresentable integrated domination scattering itself hologrammatically into the last microscopic redoubts of techno-devastated subjectivity.

> Terminal identity is only attained through a *destruction* of the self, which is very different from the liberatory potentials of a *dissolution* or *transcendence*.
>
> (p. 320)

So we're all in real trouble. There is 'an uneasy but consistent sense of human obsolescence, and at stake is the very definition of the human' (p. 201). 'Implosion' seems to be the key word.

> In Chaykin's future, the government has been replaced by the Plex (a government cum communications network cum corporate power).
>
> (p. 55)

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Without the evil black pyramid looming over the urbscape the movie can't even get started, but what is happening to the info-monopolies inside? What is critique critiquing? Bukatman ducks almost all the questions as to the destiny of broadcast-media power in a hypermedia environment, and with them attention to the configuration of post-spectacular control strategies. He assumes for the sake of convenience that cyberspace works roughly like TV, facilitating the wholesale transference of ultramodernist media critiques into digital. 'The spectacle . . . has replaced reality' (p. 64).

As with Ulmer, the result of this elision is the subsidence of a postmodern topic into an ultramodern format: an unpersuasive superstructuralist recoding of cybervirus as a politico-semiological dilemma. This is untenable. Virus is *not* signification, but machinery (TGATCCGTAGCGCACTGTT or 00101011001011101001l0 mean nothing). 'There is nothing between what the code is and what it does' (p. 376). What it chatters is how it hacks. Even when cultural viruses simulate meaning, their functioning is irreducible to static semiological concatenation. Machinic code is not distributed in a structure, but in an option-space, modelled by phase-portraits or adaptation landscapes (simulated graphically rather than theorized symbolically). Cantor provided rigorous mathematical confirmation for the Kantian thesis that space and time exceed the capacities of signification. All but a vanishingly minute proportion of semiological units are rational numbers (whole integers or digitally expressible fractions), and rational numbers are transfinitely improbable instances of real numbers of continuum-quanta. Discrete meaning involves missing information, which explodes in postmodernity as chaos (analogue-to-digital conversion malfunction). Nonlinearity infects digital media with unsymbolizable continuum. Structuralism is wrecked by the weather.

Bukatman's discussion of terminal fiction spaces, navigating through fractal geometries, decentralized urban sprawls, and virtual data-zones, continually transects 'a new and decentred spatiality . . . that exists parallel to, but outside of, the geographic topography of experiential reality' (p. 105). Yet rather than tracking this escape of experimentation into space – as with explorations of the 'picture plane' and the cinematic field, or of (O-dimensional) sonic intensities – he seeks to restore authority to signs, and thus to the (political and scientific) order to linearized reproducible discrete differences. None of which detracts from the value of *Terminal Identity* as a unique constellation of future-crash cultural materials.

If Bukatman tends to portray domination without subversion, Kelly tends – very strongly – to the reverse. *Out of Control* is a

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marxohumanist nightmare with a smile on its face, schizomarketization dissolving into microbotic swarms, matter gone insane. Complexification burns-out planning into anarchy as machines and software came to life, exhibiting a 'supercompatibility between evolution and computers' (p. 296). The economy evaporates out of bureaucratic control (any government that tells you it isn't frightened by e-cash is either lying or very stupid). Autoreplication crisis floods in from all sides, as computer revolution commoditizes the means of production, auto-subverting the bourgeois monopolization of effective fixed capital and immanentizing class war to the economy. The K-wave upswing can be expected to stimulate a bottom-up antagonism to power that is continuous and cybernetically cumulative, rather than episodic and self-cancelling. Bukatman depicts this acceleration as situationism smearing into Baudrillard hyperreal neon – reification so dense it switches into AI and starts profit-hunting on its own – yet critical transcendence perpetually reinstalls itself, vague-ing-out his thesis into hyperreal buzz (... something about capitalism and the media). Kelly (unencumbered by academic brain-death) gets down into the machinery and remains locked tightly on target: postmodern techno-natural self-organization = autonomizing micro-market dynamics. God is dead, and everything happens bottom-up. Top-down organization is inhibition.

For a European audience steeped in cynicism, class-hatred and semi-numbed suicide-blues, Kelly's Californian gee-whizzery can grate, but this is a book from the edge, packed with virus, and worth reading carefully. Its topic is so new that terminological obstacles perpetually impinge. The most compact description of the field might be 'hyperevolution': the self-assembly of option-space search strategies, or navigation of auto-complexification pathways in massively distributed systems. Kelly himself makes a large number of alternative suggestions, and continually re-starts his investigation in different terms, as he hops between ecology, computer networks, market dynamics, biological evolution, robotics, artificial life, textual machines, and other zones of decentralized intelligence: 'networks, complex adaptive systems, swarm systems, vivisystems, or collective systems' (p. 21). All such systems can be modelled as searches through a possibility- or option-space of virtual states, 'solving' problems by folding themselves into self-guiding machines.

> [C]ontrol is a spectrum. At one end there is the total domination of 'as one' control. At the other is 'out of control'. In between are varieties of control we don't have words for.
>
> (p. 329)

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One definition of complexity is resistance to compression, so that any attempt at summary is (productively) problematic. The looming shape emerging from Kelly's book is dependent upon the entire shaggy sweep of his discussion, as it tracks the tangled 'horizontal causality of massive swarms' (p. 391). The computerization of the economy and of biological science – to begin with a key 'three body problem' – involves: (1) new techno-economic feedbacks at a number of levels, qualitatively changing the system dynamics of both commercial and technical systems; (2) parallelization of networks, individual computers, and software, with a strong trend to increasing self-organization and simulation capacity; (3) the abstraction of evolutionary theory into dynamic software, the emergence of experimental evolutionisms, the radical peripheralization of natural selection as core evolutionary mechanism; (4) powerful regenerative feedbacks between robotics, computer-aided design and manufacturing systems; (5) increasing convergence between artificial intelligence, artificial life and spontaneous network effects; (6) commercial biotechnics based on sophisticated molecular genetics, network models of intra-genomic control and mutation guidance, and usage of biochemical components in technical information processing systems; (7) revolutionization of economic theory due to the multilevel impact of networks on its research tool-kit and object, increasing feedback density between business and economics, micro-economic absorption of computer-based economic self-simulations, and explosion of software trading.... This list could be continued for several pages without exhausting even the high-intensity dynamics. It has evidently become impossible to sustain a wide range of modernist distinctions: between nature and culture, natural evolution and cultural history, commerce and technics, models and objects. Computers melt everything together, and academic disciplines no longer make sense. There are no experts in cyberspace.

Kelly understands that signs have been eaten by electronic hyperspace. As priestcraft is cooked in IT writing melts back into travel. The Borgesian library – containing all possible combinations of textual elements and thus all possible texts – is an option-space, and has passed from the status of an impossible 'fantasy' into software implementation as a virtual machine. Artificial evolution involves searches through such a library, whose elements might be ASCII codes, mathematical functions, pixels, DNA codons, or other assembly unites. One strategy for such searches is a random walk, such as that of simplified classical ('neo-Darwinian') natural selection, based on the (phenotypically mediated) differentially intensive culling of ROM-genomes buffeted by noise. This is the least intelligent viable

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evolutionary strategy, with zero heuristics, no hyperevolution, and minimal communication of adaptations. Work in population and biochemical genetics, microbiology and ecology indicates that real biological systems vary positively from this mechanism, complicating it with spontaneous emergences, sexual and intragenomic selection, transgenomic transfers (e.g. bacterial omnisex and retroviral recoding) saltation, mutational heuristics, co-evolutionary dependencies, symbioses, convergent speciation, and alloplastic feedback. 'Deep, pluralistic evolution, like intelligence, is an emergent property of a community of dynamics' (p. 387). It is not a question of a dichotomic difference between evolution and design, but of a range of variagation between evolutionary machineries, or experimental pathways: self-innovating evolvability.

It is similarly misleading to reify an ideal of 'market dynamics' as a transhistorical or essential law of economics. Markets are not formal environments, but concrete adaptive systems, integrating emergent intelligence into their most basic 'principles' and changing phase. '[T]he rules for changing entities over time change over time' (p. 471). This capacity to learn enabled distributed economic systems to begin processing-out Keynesian macroeconomic management during the late 1970s, modifying the parameters of the global economy (rather than merely augmenting its content) and provoking the Dengist-neoliberal catastrophe. The 'internal' history of modern commerce is inextricable from its nature, so that the dimensionality and curvature of geosocial option-space changes along with its population. You never step into the same market-place twice.

Biology, economics and computer science are undergoing an immense and convergent upheaval as they change phase, or postmodernize. Machine-based intelligence is able to process complex nonlinear equations and simulate systems that were previously intractable to any but the most reductive analysis, and the resultant sophistications then feedback into 'market-oriented' and artificial life programs that accelerate computing techniques in turn. The trends thus induced, towards parallelism, evolution, experimentation and deterritorialization blend with wider techno-economic processes that are themselves involved in ever denser interaction. Love it or hate it, 'out of control theory' is destined to be a key ingredient of telecommercial hypermanic culture, and is currently developed to an immeasurable greater sophistication than any conceivable source of critique.

One overall 'message' of these books is that the academy is seriously malfunctioning as a source of intelligent debate about the dynamics of the current conjuncture. Its traditions of authoritarianism, disciplinary rigidity, retro-orientation, and in-group posturing,

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along with its incapacity to dissipate institutional entropy due to its top-down structure, conspire to disable the traits of connectivity, flexibility, and responsiveness that are increasingly crucial to effective research. Expect the whole rotten apparatus to cave in soon.

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Carolyn Bailey Gill (ed.), *Bataille: Writing the Sacred* (London and New York: Routledge, 1995), 195pp., £40.00 (hardback), £14.99 (paperback)

Nick Land, *The Thirst for Annihilation: Georges Bataille and Virulent Nihilism* (London and New York: Routledge, 1992), 223pp., £35.00 (hardback), £10.99 (paperback)

Arkady Plotnitsky, *Reconfigurations: Critical Theory and General Economy* (Gainsville: University Press of Florida, 1993), 426pp., £44.95 (hardback), £17.55 (paperback)

Arkady Plotnitsky, *Complementarity: Anti-epistemology after Bohr and Derrida* (Durham NC, Duke University Press, 1994), 324pp., £47.50 (hardback), £16.95 (paperback)

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These books represent a small sample of the interest in Georges Bataille that has blossomed in the 1990s. Once known, in Britain and America, primarily for his fiction Bataille is now widely recognized as one of the most profound thinkers of the twentieth century. Over the past twenty years, as his *Oeuvres Complètes* have been compiled in France in the 1970s and 1980s, the breadth of Bataille's writing and influence has become apparent across the disciplines in, for example, the fields of literature, art, art history, philosophy, critical theory, sociology, economics and anthropology.

The essays in Carolyn Bailey Gill's book, largely the proceedings of the first conference on Bataille in Britain in May 1991, concern themselves mostly with literary and art historical questions: Leslie Anne Boldt-Irons, Marie-Christine Lala, Allan Stoekl and Susan Rubin Suleiman contribute essays on Bataille's fiction; John Lechte, Briony Fer and Susan Wilson discuss Bataille's relationship with surrealism and avant-garde art theory. In other essays Jean-Michel Besnier and Alphonso Lingis take a historical perspective on Bataille's political-intellectual position and anthropology, while Michèle